

**Patent claims**

5     1. Distance meter, in particular for telescope arrangements in earth- or space-supported applications for the measurement of surfaces, comprising at least

- a radiation source for the emission of electromagnetic radiation (ES), in particular of laser light, to a target to be surveyed,
- a receiver unit having a sensor (11) for receiving radiation (S) reflected by the target and for deriving distance information from the received radiation by the pulse transit time or phase measurement method,
- at least one spatial filter component (6, 6'), the spatial filter component (6, 6') being formed and arranged so that the angular range of reception of the reflected radiation (S) is limited, characterized by a first spectral filter component (4) located upstream of the spatial filter component in the receiving direction and reflecting in the infrared range.

2. Distance meter according to Claim 1, characterized in that the spatial filter component (6, 6') is in the form of an optical fibre (6), in particular having a microlens (5) located upstream in the receiving direction.

3. Distance meter according to either of the preceding Claims, characterized in that the spatial filter component (6') is a fibre laser having a multimodal sheath and an active fibre core (6a).  
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4. Distance meter according to Claim 3, characterized in that the reflected radiation (S) is passed through the multimodal sheath, in particular with an optical cover (6b) between the fibre core (6a) and the sensor (11).  
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5. Distance meter according to Claim 3, characterized in that the reflected radiation (S) is passed through the active fibre core (6a), in particular with an optical switch between the fibre core and the sensor (11).  
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6. Distance meter according to any of the preceding Claims, characterized by a second spectral filter component (1), in particular a filter located upstream of the first spectral filter component (4) in the receiving direction and reflecting in the UV range.  
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7. Distance meter according to any of the preceding Claims, characterized by a narrowband third spectral filter component (7) between first spectral filter component (4) and sensor (11), in particular having a spectral width of less than 1 nm about the wavelength of the emitted radiation (ES).  
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8. Distance meter according to Claim 7, characterized in that the third spectral filter component (7) is an interferometric and/or a spatially periodic structure, preferably a Fabry-Perot interferometer or a reflecting grating structure.
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9. Distance meter according to any of the preceding Claims, characterized by at least two spatial filter components (6, 6'), in particular having a coordinated multi-lens array (2a'), preferably the multi-lens array (2a') being formed as a structure of a ZnSe plate (2').
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- 15 10. Distance meter according to Claim 9, characterized in that spatial filter components (6, 6') and multi-lens array (2a') are fixed by a hexagonal honeycomb-like structure, in particular comprising beryllium.

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